

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THORSTEN KRAWINKEL

Appeal 2007-1224¹
Application 10/628,725
Technology Center 1700

Decided: May 23, 2007

Before CATHERINE Q. TIMM, JEFFREY T. SMITH, and LINDA M. GAUDETTE, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant takes this appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1-17. We have jurisdiction under 35 U.S.C. § 6(b).

¹ An oral hearing was held on May 9, 2007.

We REVERSE.

I. BACKGROUND

The invention relates to an adhesive (claim 1) and an at least one layer pressure sensitive adhesive sheet strip including the adhesive of claim 1 (claim 13). The adhesive is comprised of end blocks of a vinylaromatic such as styrene and at least one block composed of a conjugated diene (1,3 diene). "In the preparation of block copolymers based on vinylaromatics, preferably styrene and 1, 3-dienes, especially isoprene and butadiene, both 1,2-linked and 1,4-linked dienes are incorporated into the diene block." (Specification 7:3-5). "Since the 1,2-linked dienes contain a terminal double bond, while the double bond in the case of the 1,4-linked dienes is in the main chain, a selective hydrogenation of the terminal and hence more reactive double bonds is possible." (Specification 7:6-9). The claimed adhesive composition is limited to block copolymers in which the fraction of 1,2-linked diene is selectively hydrogenated. Claim 1 is illustrative of the subject matter on appeal:

1. An adhesive for an at least one-layer pressure sensitive adhesive sheet strip which is residuelessly and nondestructively redetachable by extensive stretching substantially in the bond plane, said adhesive being comprised of at least one block copolymer having one or two end blocks composed of vinylaromatics, and

a block composed of a conjugated diene, wherein the fraction of 1,2-linked diene is selectively hydrogenated.

The Examiner relies upon the following prior art as evidence of unpatentability:

Lühmann

US 6,004,665

Dec. 21, 1999

Butadiene Polymers, Concise Encyclopedia of Polymer Science and Engineering 97-98 (Jacqueline I. Kroschwitz ed., 1990)(Concise Encyclopedia)

The Examiner rejects claims 1-16 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Lühmann as evidenced by the Concise Encyclopedia.² The Examiner rejects claim 17 under 35 U.S.C. § 103(a) as unpatentable over Lühmann.

II. DISCUSSION

The key dispute in this appeal is a dispute over whether the fraction of 1,2-linked diene in the self-adhesive composition of Lühmann would inherently be selectively hydrogenated as claimed. The Examiner finds this claim limitation inherently met by the disclosure in Lühmann at column 3, lines 42-64. Appellant contends that “insofar as Lühmann refers to his D blocks as being selectively hydrogenated, this would clearly be understood by those of ordinary skill in the art to mean that some **D blocks** are hydrogenated, and some are not.” (Br. 4). This is different than what is claimed according to Appellant because “as defined by the independent claim, it is the 1,2 linked diene that is **selectively hydrogenated** (i.e., all the dienes are not hydrogenated; only the 1,2 linked diene).” (Br. 4).

² The Examiner failed to include the Concise Encyclopedia in the statement of the rejection, but relied upon it in the body of the rejection and also listed it in the “Evidence Relied Upon” section of the Answer. Appellant was aware of the Examiner’s reliance on the reference (Hearing, May 9, 2007). We have considered it and we include it in the statement of rejection to properly reflect its use as evidence in the rejection.

The relevant part of Lühmann relied upon by the Examiner to support the inherency finding is as follows:

The self-adhesive compositions used are preferably those based on block copolymers comprising polymer blocks formed from vinylaromatic compounds (A blocks), preferably styrene, and those formed by polymerization of 1,3-dienes (D blocks), preferably butadiene and isoprene. Both homo- and copolymer blocks can be used in accordance with the invention. Resulting block copolymers may contain identical or different D blocks, which can be partially, selectively or completely hydrogenated.

(Lühmann, col. 3, ll. 42-50).

The relied upon portion of Lühmann does not adequately support the Examiner's finding that the fraction of 1,2-linked dienes in the block copolymer would be inherently selectively hydrogenated as claimed in the process of Lühmann. In general, a limitation is inherent if it is the "natural result flowing from" the explicit disclosure of the prior art. *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379, 67 USPQ2d 1664, 1669 (Fed. Cir. 2003). "Inherency ... may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient." *Mehl/Biophile Int'l. Corp. v. Milgraum*, 192 F.3d 1362, 1365, 52 USPQ2d 1303, 1305 (Fed. Cir. 1999)(*quoting In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)).

We agree with the Examiner that polymerizing the 1,3 dienes (butadiene and/or isoprene) will necessarily result in both 1,2-links and 1,4-links in the D blocks of Lühmann's block copolymers. In fact, Appellant's own Specification supports this finding when it states that "[i]n the preparation of block copolymers based on vinylaromatics, preferably styrene and 1,3-dienes, especially isoprene and butadiene, both 1,2-linked and 1,4-

linked dienes are incorporated into the diene block.” (Specification 7:3-5). The Concise Encyclopedia also supports the finding (Concise Encyclopedia, second headed “Microstructure”). But Lühmann contains no specific disclosure of selective hydrogenation of one type of *linked diene* within the D block over another type of *linked diene*. All Lühmann states is that the *D blocks* “can be partially, selectively or completely hydrogenated.” (Lühmann, col. 3, ll. 48-50). While it is possible that one might, in following the process of Lühmann, end up hydrogenating 1,2-links selectively over 1,4-links, the Examiner has not established that such necessarily occurs as a natural result flowing from following the process of Lühmann. Appellant’s Specification states that “a selective hydrogenation of the terminal and hence more reactive double bonds is *possible*” (Specification 7:8-9 (emphasis added)), but, again, this is a merely possibility, and it implies that one must select some particular conditions in order for it to occur. The Examiner has neither identified the reaction conditions that are necessary to selectively hydrogenate the 1,2-linked diene of Lühmann nor provided evidence or technical reasoning showing that those conditions are necessarily present in the process of Lühmann.

The Examiner has not established that the 1,2-linked diene of Lühmann is selectively hydrogenated as required by all the claims.

The Examiner also notes that “even if other moieties besides the fraction of 1,2-linked diene which is selectively hydrogenated are present in the adhesive composition this fact is simply irrelevant in view of the fact that all of his claims are opened ended.” (Answer 4). We agree that the claim is open to the inclusion of other ingredients in the adhesive by virtue of the transitional phrase “comprised of.” However, to the extent the Examiner is

making a finding that hydrogenated 1,4-linked dienes within the diene block are encompassed by the claims, we cannot agree. The claim specifically requires that the fraction of 1,2-linked diene within the diene block be selectively hydrogenated. In order for the term “selectively” to have meaning, something else must not be selected. In the present context (Specification 7:13-13 and 8:1-11), the 1,2-links are selected for hydrogenation while the 1,4-links are not (*see also* Br. 4).

With respect to the rejection of claim 17, the Examiner relies upon Lühmann in the same capacity as discussed above and, therefore, the rejection fails for the same reasons as discussed above.

IV. DECISION

With regard to decision of the Examiner to reject claims 1-16 as unpatentable under either 35 U.S.C. § 102(b) or § 103(a) and the Examiner’s decision to reject claim 17 under 35 U.S.C. § 103(a), we REVERSE.

REVERSED

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